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## NOTICE OF ALLOWANCE AND FEE(S) DUE

38823

7590

02/09/2009

AT&T Legal Department - TKHR  
Attn: Patent Docketing  
One AT&T Way  
Room 2A-207  
Bedminster, NJ 07921

EXAMINER

PHAN, TUANKHANH D

ART UNIT

PAPER NUMBER

2163

DATE MAILED: 02/09/2009

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/685,558	10/14/2003	W. Todd Daniell	190250-1610	4932
TITLE OF INVENTION: PHONETIC FILTERING OF UNDESIRED EMAIL MESSAGES				

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	05/11/2009

THE APPLICATION IDENTIFIED ABOVE HAS BEEN EXAMINED AND IS ALLOWED FOR ISSUANCE AS A PATENT. **PROSECUTION ON THE MERITS IS CLOSED.** THIS NOTICE OF ALLOWANCE IS NOT A GRANT OF PATENT RIGHTS. THIS APPLICATION IS SUBJECT TO WITHDRAWAL FROM ISSUE AT THE INITIATIVE OF THE OFFICE OR UPON PETITION BY THE APPLICANT. SEE 37 CFR 1.313 AND MPEP 1308.

THE ISSUE FEE AND PUBLICATION FEE (IF REQUIRED) MUST BE PAID WITHIN **THREE MONTHS FROM THE MAILING DATE OF THIS NOTICE** OR THIS APPLICATION SHALL BE REGARDED AS ABANDONED. **THIS STATUTORY PERIOD CANNOT BE EXTENDED.** SEE 35 U.S.C. 151. THE ISSUE FEE DUE INDICATED ABOVE DOES NOT REFLECT A CREDIT FOR ANY PREVIOUSLY PAID ISSUE FEE IN THIS APPLICATION. IF AN ISSUE FEE HAS PREVIOUSLY BEEN PAID IN THIS APPLICATION (AS SHOWN ABOVE), THE RETURN OF PART B OF THIS FORM WILL BE CONSIDERED A REQUEST TO REAPPLY THE PREVIOUSLY PAID ISSUE FEE TOWARD THE ISSUE FEE NOW DUE.

### HOW TO REPLY TO THIS NOTICE:

I. Review the SMALL ENTITY status shown above.

If the SMALL ENTITY is shown as YES, verify your current SMALL ENTITY status:

A. If the status is the same, pay the TOTAL FEE(S) DUE shown above.

B. If the status above is to be removed, check box 5b on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and twice the amount of the ISSUE FEE shown above, or

If the SMALL ENTITY is shown as NO:

A. Pay TOTAL FEE(S) DUE shown above, or

B. If applicant claimed SMALL ENTITY status before, or is now claiming SMALL ENTITY status, check box 5a on Part B - Fee(s) Transmittal and pay the PUBLICATION FEE (if required) and 1/2 the ISSUE FEE shown above.

II. PART B - FEE(S) TRANSMITTAL, or its equivalent, must be completed and returned to the United States Patent and Trademark Office (USPTO) with your ISSUE FEE and PUBLICATION FEE (if required). If you are charging the fee(s) to your deposit account, section "4b" of Part B - Fee(s) Transmittal should be completed and an extra copy of the form should be submitted. If an equivalent of Part B is filed, a request to reapply a previously paid issue fee must be clearly made, and delays in processing may occur due to the difficulty in recognizing the paper as an equivalent of Part B.

III. All communications regarding this application must give the application number. Please direct all communications prior to issuance to Mail Stop ISSUE FEE unless advised to the contrary.

**IMPORTANT REMINDER:** Utility patents issued on applications filed on or after Dec. 12, 1980 may require payment of maintenance fees. It is patentee's responsibility to ensure timely payment of maintenance fees when due.

# **PART B - FEE(S) TRANSMITTAL**

**Complete and send this form, together with applicable fee(s), to:** Mail **Mail Stop ISSUE FEE**  
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**INSTRUCTIONS:** This form should be used for transmitting the ISSUE FEE and PUBLICATION FEE (if required). Blocks 1 through 5 should be completed where appropriate. All further correspondence including the Patent, advance orders and notification of maintenance fees will be mailed to the current correspondence address as indicated unless corrected below or directed otherwise in Block 1, by (a) specifying a new correspondence address; and/or (b) indicating a separate "FEE ADDRESS" for maintenance fee notifications.

CURRENT CORRESPONDENCE ADDRESS (Note: Use Block 1 for any change of address)

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38823 7590 02/09/2009  
 AT&T Legal Department - TKHR  
 Attn: Patent Docketing  
 One AT&T Way  
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 Bedminster, NJ 07921

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I hereby certify that this Fee(s) Transmittal is being deposited with the United States Postal Service with sufficient postage for first class mail in an envelope addressed to the Mail Stop ISSUE FEE address above, or being facsimile transmitted to the USPTO (571) 273-2885, on the date indicated below.

(Depositor's name)
(Signature)
(Date)

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/685,558	10/14/2003	W. Todd Daniell	190250-1610	4932
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TITLE OF INVENTION: PHONETIC FILTERING OF UNDESIREED EMAIL MESSAGES

APPLN. TYPE	SMALL ENTITY	ISSUE FEE DUE	PUBLICATION FEE DUE	PREV. PAID ISSUE FEE	TOTAL FEE(S) DUE	DATE DUE
nonprovisional	NO	\$1510	\$300	\$0	\$1810	05/11/2009

EXAMINER	ART UNIT	CLASS-SUBCLASS
PHAN, TUANKHANH D	2163	709-200000

1. Change of correspondence address or indication of "Fee Address" (37 CFR 1.363).

- ☐ Change of correspondence address (or Change of Correspondence Address form PTO/SB/122) attached.  
☐ "Fee Address" indication (or "Fee Address" Indication form PTO/SB/47; Rev 03-02 or more recent) attached. Use of a **Customer Number is required.**

2. For printing on the patent front page, list

- (1) the names of up to 3 registered patent attorneys or agents OR, alternatively, 1 \_\_\_\_\_  
 (2) the name of a single firm (having as a member a registered attorney or agent) and the names of up to 2 registered patent attorneys or agents. If no name is listed, no name will be printed. 2 \_\_\_\_\_  
 3 \_\_\_\_\_

3. ASSIGNEE NAME AND RESIDENCE DATA TO BE PRINTED ON THE PATENT (print or type)

PLEASE NOTE: Unless an assignee is identified below, no assignee data will appear on the patent. If an assignee is identified below, the document has been filed for recordation as set forth in 37 CFR 3.11. Completion of this form is NOT a substitute for filing an assignment.

(A) NAME OF ASSIGNEE

(B) RESIDENCE: (CITY and STATE OR COUNTRY)

Please check the appropriate assignee category or categories (will not be printed on the patent): ☐ Individual ☐ Corporation or other private group entity ☐ Government

4a. The following fee(s) are submitted:

- ☐ Issue Fee  
☐ Publication Fee (No small entity discount permitted)  
☐ Advance Order - # of Copies \_\_\_\_\_

4b. Payment of Fee(s): (Please first reapply any previously paid issue fee shown above)

- ☐ A check is enclosed.  
☐ Payment by credit card. Form PTO-2038 is attached.  
☐ The Director is hereby authorized to charge the required fee(s), any deficiency, or credit any overpayment, to Deposit Account Number \_\_\_\_\_ (enclose an extra copy of this form).

5. Change in Entity Status (from status indicated above)

- ☐ a. Applicant claims SMALL ENTITY status. See 37 CFR 1.27. ☐ b. Applicant is no longer claiming SMALL ENTITY status. See 37 CFR 1.27(g)(2).

NOTE: The Issue Fee and Publication Fee (if required) will not be accepted from anyone other than the applicant; a registered attorney or agent; or the assignee or other party in interest as shown by the records of the United States Patent and Trademark Office.

Authorized Signature \_\_\_\_\_ Date \_\_\_\_\_  
 Typed or printed name \_\_\_\_\_ Registration No. \_\_\_\_\_

This collection of information is required by 37 CFR 1.311. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 12 minutes to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, U.S. Department of Commerce, P.O. Box 1450, Alexandria, Virginia 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, Virginia 22313-1450.

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EXAMINER

PHAN, TUANKHANH D

ART UNIT

PAPER NUMBER

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## Determination of Patent Term Adjustment under 35 U.S.C. 154 (b) (application filed on or after May 29, 2000)

The Patent Term Adjustment to date is 1008 day(s). If the issue fee is paid on the date that is three months after the mailing date of this notice and the patent issues on the Tuesday before the date that is 28 weeks (six and a half months) after the mailing date of this notice, the Patent Term Adjustment will be 1008 day(s).

If a Continued Prosecution Application (CPA) was filed in the above-identified application, the filing date that determines Patent Term Adjustment is the filing date of the most recent CPA.

Applicant will be able to obtain more detailed information by accessing the Patent Application Information Retrieval (PAIR) WEB site (<http://pair.uspto.gov>).

Any questions regarding the Patent Term Extension or Adjustment determination should be directed to the Office of Patent Legal Administration at (571)-272-7702. Questions relating to issue and publication fee payments should be directed to the Customer Service Center of the Office of Patent Publication at 1-(888)-786-0101 or (571)-272-4200.

**Notice of Allowability****Application No.**

10/685,558

**Applicant(s)**

DANIELL ET AL.

**Examiner**

TUAN-KHANH PHAN

**Art Unit**

2163

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/17/2008.
2. ☒ The allowed claim(s) is/are 1-20.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All b) ☐ Some\* c) ☐ None of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.  
Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

1. ☐ Notice of References Cited (PTO-892)
2. ☐ Notice of Draftperson's Patent Drawing Review (PTO-948)
3. ☒ Information Disclosure Statements (PTO/SB/08),  
Paper No./Mail Date 11/17/2008
4. ☐ Examiner's Comment Regarding Requirement for Deposit of Biological Material
5. ☐ Notice of Informal Patent Application
6. ☐ Interview Summary (PTO-413),  
Paper No./Mail Date \_\_\_\_\_
7. ☒ Examiner's Amendment/Comment
8. ☒ Examiner's Statement of Reasons for Allowance
9. ☐ Other \_\_\_\_\_.

/T. P./  
Examiner, Art Unit 2163

/don wong/  
Supervisory Patent Examiner, Art Unit 2163

### EXAMINER'S AMENDMENT

This action is responsive to the following communication: Request for continued Examination, filed 11/10/2008.

An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with the Applicants' representative, Anthony F. Bonner on Thursday Jan. 15 and Thursday Jan. 22, 2009 (confirmation message).

The application has been amended as follows:

Claim 1. (Currently Amended) A method comprising:

training an email system for determining spam, where training includes at least the following:

~~receiving an email message having a word;~~

retrieving a first email message;

generating a phonetic equivalent of ~~the~~ at least one word from a body portion of the email message;

tokenizing the phonetic equivalent of the word to generate a token representative of the phonetic equivalent;

tokenizing at least one word in a subject line of the first email message;  
tokenizing at least one simple mail transfer protocol (SMTP) email address associated  
with the first email message;

tokenizing at least one domain name associated with the first email message;  
tokenizing at least one attachment of the first email message, wherein tokenizing  
the at least one attachment includes in generating a 128-bit MD5 hash of the  
attachment, appending a 32-bit length of the attachment to the, generated MD5 hash  
resulting in a 160-bit number, and UUencoding the resulting 160-bit number;

determining a spam probability from the generated ~~token~~ tokens;  
in response to ~~determining a determination that~~ the spam probability from the  
generated ~~token~~, tokens indicates that the first email message is likely spam;

determining whether the, generated tokens are present in a database of  
tokens;

in response to a determination that at least one of the, generated tokens is  
not present in the database of tokens, assigning ~~whether the token exists in a~~  
probability value for each token as spam and adding the token and assigned  
probability value to the database of tokens; and

in response to ~~determining a determination~~ that the token exists ~~is present~~  
in the database of tokens, updating a probability value of the token; and

in response to ~~determining a determination that~~ the spam probability from  
the generated ~~tokens~~, tokens, indicates that the first email message is not likely  
spam;

determining whether the generated tokens are present in a database of tokens;

in response to a determination that at least one of the generated tokens is not present in the database of tokens, assigning a probability value for each token indicative of non-spam and adding the token and assigned probability value to the database of tokens; and

~~in response to determining that the token does not exist in the database of tokens, assigning a probability value indicative of spam to the token.~~

in response to a determination that the token is present in the database of tokens, updating a probability value of the token; sorting the generated tokens in accordance with the corresponding determined spam probability value; and filtering a second email message according to the training.

2. (Previously Presented) The method of claim 1, wherein generating the phonetic equivalent of the word comprises:

identifying a string of characters, the string of characters including a non-alphabetic character; and removing the non-alphabetic character from the string of characters.

3. (Previously Presented) The method of claim 2, wherein removing the non-alphabetic character comprises:

locating a non-alphabetic character within the string of characters, the non-alphabetic character being at least one selected from the group consisting of:

" (quote);  
' (single quote);  
! (exclamation mark);  
@ (at); # (pound); \$ (dollar);  
% (percent);  
^ (caret);  
& (ampersand);  
\* (asterisk);  
( (open parenthesis);  
) (close parenthesis);  
\_ (underscore);  
- (hyphen);  
+ (plus);  
= (equal);  
\ (backslash);  
/ (slash);  
? (question mark);  
  
(space);  
  
(tab);  
  
[ (open square bracket);  
] (close square bracket);  
  
{ (open bracket);



} (close bracket);

< (less than);

> (greater than);

, (comma);

:(colon);

;(semi-colon); and

. (period).

4. (Previously Presented) The method of claim 1, wherein determining the spam probability comprises:

assigning a spam probability value to the token; and

generating a Bayesian probability value using the spam probability value assigned to the token.

5. (Previously Presented) The method of claim 4, wherein determining the spam probability further comprises: comparing the generated Bayesian probability value with a predefined threshold value.

6. (Previously Presented) The method of claim 5, wherein determining the spam probability further comprises: categorizing the email message as spam in response to the Bayesian probability value being greater than the predefined threshold.

7. (Previously Presented) The method of claim 5, wherein determining the spam probability further comprises: categorizing the email message as non-spam

in response to the Bayesian probability value being not greater than the predefined threshold.

8. (Currently Amended) A training email system for determining spam on a computer storage medium comprising:

means for receiving an email message having a word; word and an attachment;

means for generating a phonetic equivalent of the at least one word from a body portion of the email message;

means for tokenizing the phonetic equivalent of the word to generate a token representative of the phonetic equivalent;

means for tokenizing at least one word in a subject line of the first email message;

means for tokenizing at least one word in a subject line of the first email message; tokenizing at least one simple mail transfer protocol (SMTP) email address associated with the first email message;

means for tokenizing at least one domain name associated with the first email message;

means for tokenizing at least one attachment of the first email message, wherein tokenizing the at least one attachment includes in generating a 128-bit MD5 hash of the attachment, appending a 32-bit length of the attachment to the, generated MD5 hash resulting in a 160-bit number, and UUencoding the resulting 160-bit number;

means for determining a spam probability from the generated tokens;

in response to a determination that the spam probability from the generated tokens, means for indicating that the first email message is likely spam:

means for determining whether the generated tokens are present in a database of tokens;

in response to a determination that at least one of the, generated tokens is not present in the database of tokens, means for assigning a probability value for each token as spam and adding the token and assigned probability value to the database of tokens; and

in response to a determination that the token is present in the database of tokens, means for updating a probability value of the token; and

in response to a determination that the spam probability from the generated tokens, means for indicating that the first email message is not likely spam:

determining whether the , generated tokens are present in a database of tokens;

in response to a determination that at least one of the, generated tokens is not present in the database of tokens, assigning a probability value for each token indicative of non-spam and adding the token and assigned probability value to the database of tokens; and

a means for tokenizing the attachment;

means for determining a spam probability from the generated token; and

~~means for sorting the generated tokens in accordance with the  
corresponding determined spam probability value.~~

in response to a determination that the token is present in the database of  
tokens, updating a probability value of the token; sorting the generated tokens in  
accordance with the corresponding determined spam probability value; and  
filtering a second email message according to the training.

9. (Currently Amended) A system comprising:

a processor; and

a memory, the memory storing:

receive logic configured to receive an email message having a  
~~word;~~ word and an attachment;

phonetic logic configured to generate a phonetic equivalent of the  
word from the email message;

first tokenize logic configured to tokenize the phonetic equivalent of  
the word to generate a token representative of the phonetic equivalent;

and

second tokenize logic configured to tokenize the attachment;

tokenizing at least one word in a subject line of the first email message;  
tokenizing at least one simple mail transfer protocol (SMTP) email address associated  
with the first email message;

tokenizing at least one domain name associated with the first email message;

tokenizing at least one attachment of the first email message, wherein tokenizing the at least one attachment includes in generating a 128-bit MD5 hash of the attachment, appending a 32-bit length of the attachment to the, generated MD5 hash resulting in a 160-bit number, and UUencoding the resulting 160-bit number;

determining a spam probability from the generated tokens;

in response to a determination that the spam probability from the generated tokens indicates that the first email message is likely spam;

determining whether the, generated tokens are present in a database of tokens;

in response to a determination that at least one of the generated tokens is not present in the database of tokens, assigning a probability value for each token as spam and adding the token and assigned probability value to the database of tokens; and

in response to a determination that the token is present in the database of tokens, updating a probability value of the token; and

in response to a determination that the spam probability from the generated tokens, indicates that the first email message is not likely spam;

determining whether the generated tokens are present in a database of tokens;

in response to a determination that at least one of the, generated tokens is not present in the database of tokens, assigning a probability value for each

token indicative of non-spam and adding the token and assigned probability value to the database of tokens; and

in response to a determination that the token is present in the database of tokens, updating a probability value of the token; sorting the generated tokens in accordance with the corresponding determined spam probability value; and filtering a second email message according to the training.

~~spam-determination logic configured to determine a spam probability from the generated tokens; and sorting logic configured to sort the generated tokens in accordance with the corresponding determined spam probability value.~~

10. (Previously Presented) The system of claim 9, the memory further storing:

string-identification logic configured to identify a string of characters, the string of characters including a non-alphabetic character; and

character-removal logic configured to remove the non-alphabetic character from the string of characters.

11. (Previously Presented) The system of claim 10, the memory further storing: spam-probability logic configured to assign a spam probability value to the token; and Bayesian logic configured to generate a Bayesian probability value using the spam probability value assigned to the token.

12. (Previously Presented) The system of claim 11, the memory further storing: compare logic configured to compare the generated Bayesian probability value with a predefined threshold value.

13. (Previously Presented) The system of claim 12, the memory further storing: spam-categorization logic configured to categorize the email message as spam in response to the Bayesian probability value being greater than the predefined threshold.

14. (Previously Presented) The system of claim 12, the memory further storing: spam-categorization logic configured to categorize the email message as non-spam in response to the Bayesian probability value being not greater than the predefined threshold.

15. (Currently Amended) A computer-readable medium that includes a program that, when executed by a computer, causes the computer to perform at least the following:

~~a processor; and a memory, the memory storing:~~  
~~computer-readable code adapted to instruct a programmable device to~~  
receive an email message having a word and an attachment;  
~~computer-readable code adapted to instruct a programmable device to~~  
generate a phonetic equivalent of the word from the email message;  
~~computer-readable code adapted to instruct a programmable device to~~  
tokenize the phonetic equivalent of the word to generate a token  
representative of the phonetic equivalent;

tokenize the attachment;

generate a phonetic equivalent of at least one word from a body portion of the email message;

tokenize the phonetic equivalent of the word to generate a token representative of the phonetic equivalent;

tokenize at least one word in a subject line of the first email message;  
tokenizing at least one simple mail transfer protocol (SMTP) email address associated with the first email message;

tokenize at least one domain name associated with the first email message;

tokenize at least one attachment of the first email message, wherein tokenizing the at least one attachment includes in generating a 128-bit MD5 hash of the attachment, appending a 32-bit length of the attachment to the, generated MD5 hash resulting in a 160-bit number, and UUencoding the resulting 160-bit number;

determine a spam probability from the generated tokens;

in response to a determination that the spam probability from the generated tokens, indicate that the first email message is likely spam;

determine whether the, generated tokens are present in a database of tokens;



in response to a determination that at least one of the, generated tokens is not present in the database of tokens, assigning a probability value for each token as spam and adding the token and assigned probability value to the database of tokens; and

in response to a determination that the token is present in the database of tokens, updating a probability value of the token; and

in response to a determination that the spam probability from the generated tokens, indicates that the first email message is not likely spam; determining whether the generated tokens are present in a database of tokens;

in response to a determination that at least one of the, generated tokens is not present in the database of tokens, assigning a probability value for each token indicative of non-spam and adding the token and assigned probability value to the database of tokens; and

in response to a determination that the token is present in the database of tokens, update a probability value of the token;

sort the generated tokens in accordance with the corresponding determined spam probability value; and filter a second email message according to the training,

computer-readable code adapted to instruct a programmable device to determine a spam probability from the generated token; and

~~sort the generated tokens in accordance with the corresponding determined spam probability value.~~

16. (Currently Amended) The computer-readable medium of claim 15, ~~the memory further storing; the program further causing the computer to perform at least the following:~~

computer readable code adapted to instruct a programmable device to identify a string of characters, the string of characters including a non-alphabetic character; and

~~computer readable code adapted to instruct a programmable device to remove the non- alphabetic character from the string of characters.~~

17. (Currently Amended) The computer-readable medium of claim 15, ~~the memory further storing; the program further causing the computer to perform at least the following:~~ computer readable code adapted to instruct a programmable device to assign a spam probability value to the token; and computer readable code adapted to instruct a programmable device to generate a Bayesian probability value using the spam probability value assigned to the token.

18. (Currently Amended) The computer-readable medium of claim 17, ~~the memory further storing; the program further causing the computer to perform at least the following:~~ computer readable code adapted to instruct a programmable device to compare the generated Bayesian probability value with a predefined threshold value.

19. (Currently Amended) The computer-readable medium of claim 18, ~~the memory further storing: the program further causing the computer to perform at least the following: computer-readable code adapted to instruct a programmable device to~~ categorize the email message as spam in response to the Bayesian probability value being greater than the predefined threshold.

20. (Currently Amended) The computer-readable medium of claim 18, ~~the memory further storing: the program further causing the computer to perform at least the following: computer-readable code adapted to instruct a programmable device to~~ categorize the email message as non-spam in response to the Bayesian probability value being not greater than the predefined threshold.

***Allowable Subject Matter***

Claims 1-20 are allowed.

The following is an examiner's statement of reasons for allowance: Independent claims 1, 8, 9 and 15, when considered as a whole, are allowable over the prior arts of records. Specifically, prior arts of records fail to clearly teach or fairly suggest the combination of the following limitations:

- generating a phonetic equivalent of at least one word from a body portion of the email message;
- tokenizing the phonetic equivalent of the word to generate a token representative of the phonetic equivalent;

- tokenizing at least one word in a subject line of the first email message;  
tokenizing at least one simple mail transfer protocol (SMTP) email address  
associated with the first email message;
- tokenizing at least one domain name associated with the first email message;
- tokenizing at least one attachment of the first email message, wherein tokenizing  
the at least one attachment includes in generating a 128-bit MD5 hash of the  
attachment, appending a 32-bit length of the attachment to the, generated MD5  
hash resulting in a 160-bit number, and UUencoding the resulting 160-bit  
number;
- determining a spam probability from the generated tokens;
- in response to a determination that the spam probability from the generated  
tokens, indicates that the first email message is likely spam:
  - determining whether the, generated tokens are present in a  
database of tokens;
  - in response to a determination that at least one of the, generated  
tokens is not present in the database of tokens, assigning a  
probability value for each token as spam and adding the token and  
assigned probability value to the database of tokens; and
  - in response to a determination that the token is present in the  
database of tokens, updating a probability value of the token; and

- in response to a determination that the spam probability from the generated tokens, indicates that the first email message is not likely spam;
- determining whether the generated tokens are present in a database of tokens;
- in response to a determination that at least one of the, generated tokens is not present in the database of tokens, assigning a probability value for each token indicative of non-spam and adding the token and assigned probability value to the database of tokens; and
- in response to a determination that the token is present in the database of tokens, updating a probability value of the token; sorting the generated tokens in accordance with the corresponding determined spam probability value; and filtering a second email message according to the training.

The dependent claims 2-7, 10-14 and 16-20, further add limitations to the allowable subject matter of the corresponding independent claims; thus they are also allowable.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably

accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

***Inquiry***

Any inquiry concerning this communication or earlier communications from the examiner should be directed to TUAN-KHANH PHAN whose telephone number is (571)270-3047. The examiner can normally be reached on 4/5/9.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Don Wong can be reached on 571-272-1834. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/T. K. P./  
Examiner, Art Unit 2163

/don wong/  
Supervisory Patent Examiner, Art Unit 2163